PS-313FA

AEP Model
E Model

FULL AUTOMATIC STEREO TURNTABLE SYSTEM

SPECIFICATIONS

GENERAL

Power Requirements: 120 or 220V ac adjustable, 50/60 Hz (AEP model)
110, 120, 220 or 240V ac adjustable, 50/60 Hz (E model)

Power Consumption: 6W

Dimensions: Approx. 450 (w) x 135 (h) x 385 (d) mm
17 3/4 (w) x 5 3/8 (h) x 15 1/4 (d) inches
including projecting parts and controls

Weight: Approx. 7.5 kg, 16 lb 9 oz (net)
8.8 kg, 19 lb 6 oz (with shipping carton)

TURNTABLE

Platter: 32.6 cm (12 7/8 inches) dia.
Aluminum-alloy diecast

Motor: DC servo-controlled motor (brushless and slotless)

Drive System: Direct drive

Speed: 33 1/3, 45 rpm

Wow and Flutter: 0.03% (WRMS)
±0.045% (DIN)

S/N Ratio: 70 dB

Pitch Control Range: ±3%

TONEARM

Type: Statically balanced, universal

Arm Length: 300 mm, 11 3/4 inches, overall
216.5 mm, 8 1/2 inches, pivot-to-stylus

Overhang: 16.5 mm, 21/32 inches

Tracking Error: +3°, -1°

Tracking-force Adjustment Range: 0–3 g

Shell Weight: 7.5 g

Cartridge Weight Range: 4–12 g

– Continued on page 2 –

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SONY®
SERVICE MANUAL

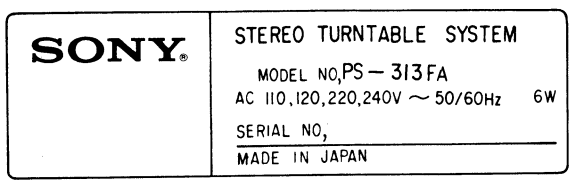
CARTRIDGE (VL-34G)

Type:	Moving magnet type
Frequency Response:	10–30,000 Hz
Channel Separation:	25 dB at 1 kHz
Output Voltage:	3 mV at 1 kHz, 5 cm/sec, 45°
Load Impedance:	50 kΩ
Tracking Force:	1.5–2.5 g (2 g recommended)
Stylus:	Sony ND-134G (conical 0.6 mil diamond)
Weight:	5.5 g

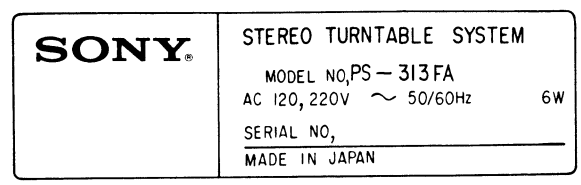
MODEL IDENTIFICATION

– Specification Label –

E model

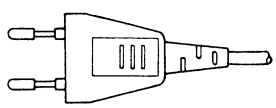


AEP model

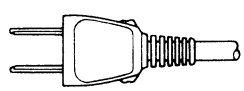


– Power Cord (E model) –

euro-plug (1-534-817-XX)

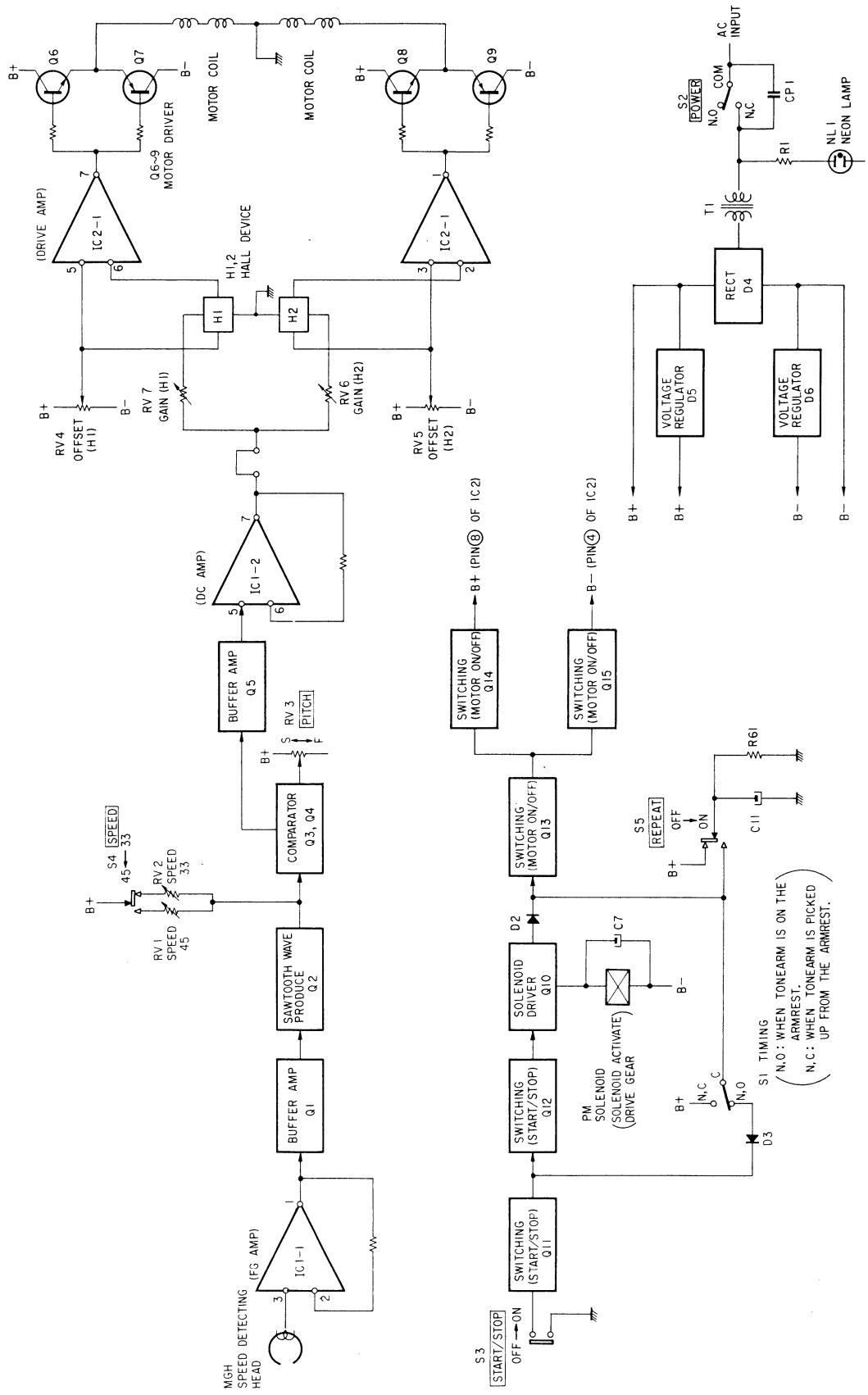


parallel blade plug (1-551-472-00)



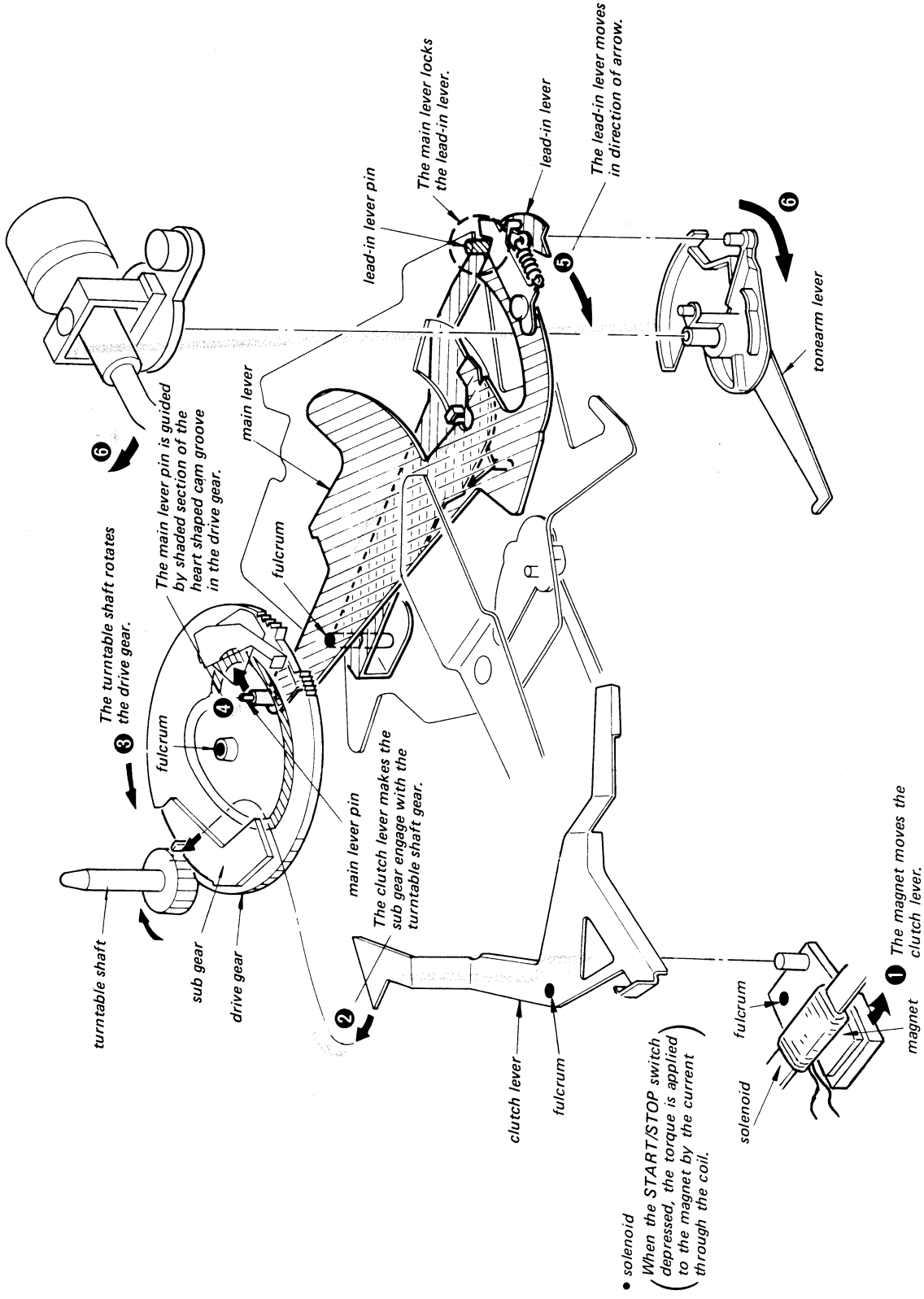
SECTION 1
OUTLINE

1-1. BLOCK DIAGRAM

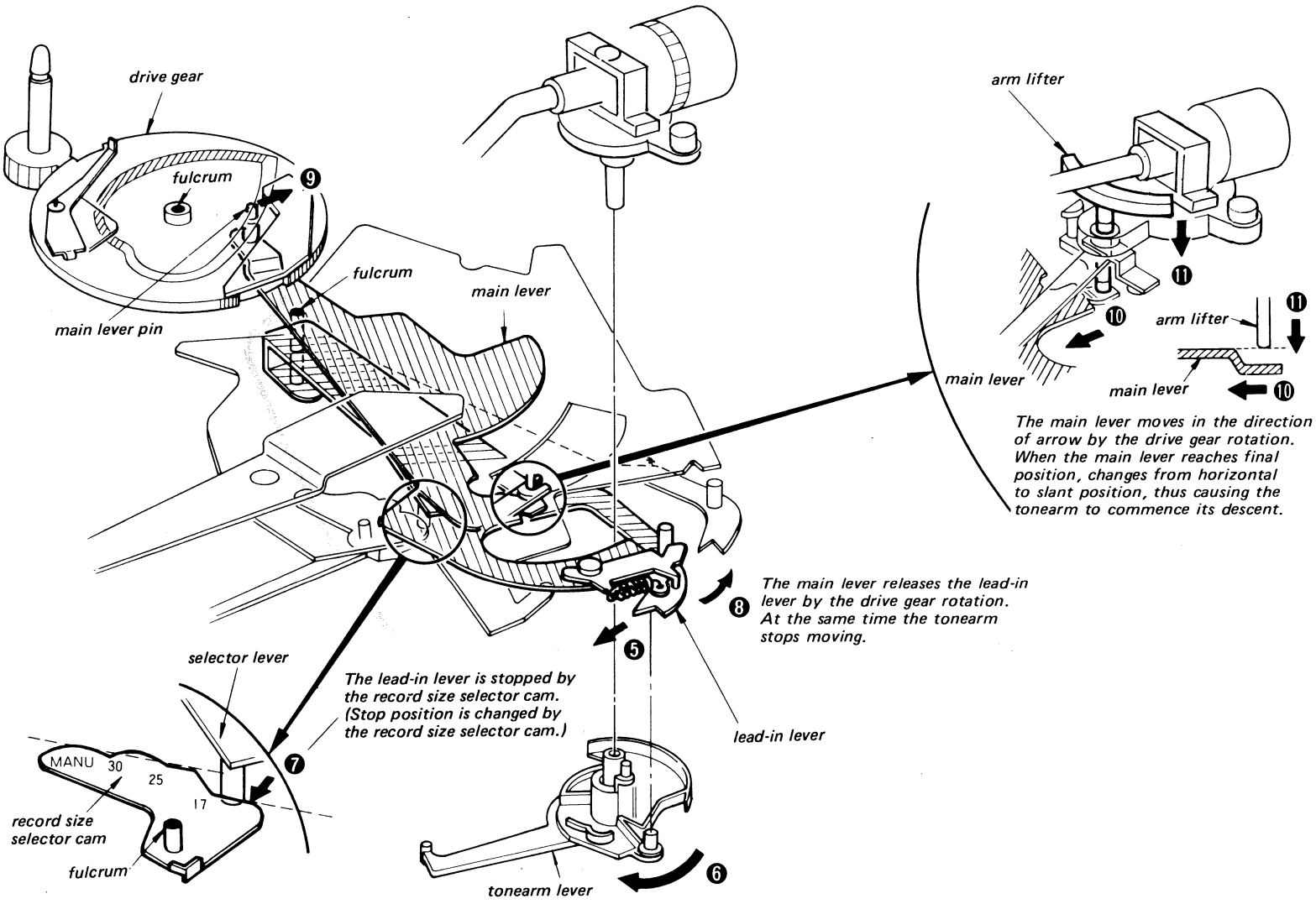


1-2. MECHANICAL OPERATION

A) Automatic Start Operation (1)



B) Automatic Start Operation (2)

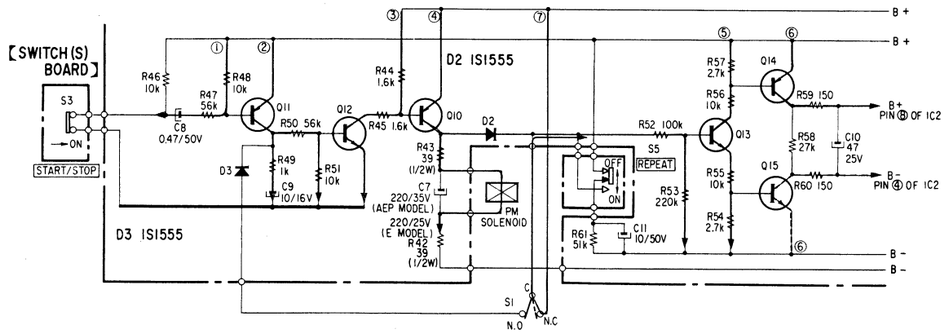


C) Automatic Return Operation

1-3. ELECTRICAL DESCRIPTION

Operation When the START/STOP Button is Pushed

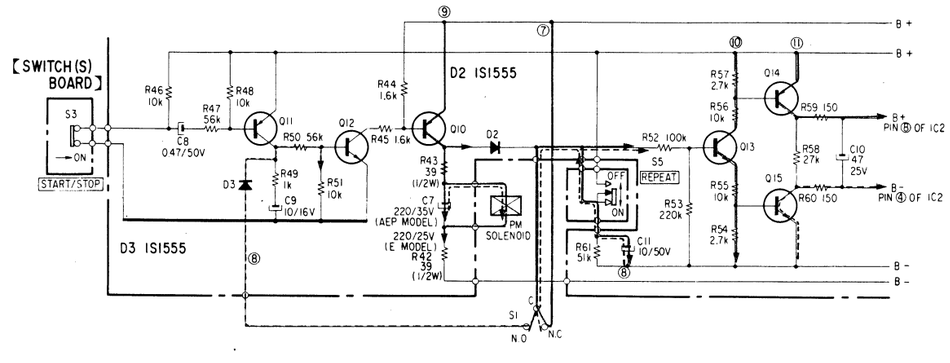
1. When the START/STOP button (S3) is pushed, the current temporarily flows via route ①, turning on Q11 (route ②). Q12 turns on at the same time (route ③).
2. When the current flows via route ③, the bias voltage is applied to Q10, turning it on (route ④). At the same time Q13 turns on (route ⑤). This provides bias voltage to Q14 and Q15 by (route ⑤), which then conduct. The power supply is fed to IC2 (route ⑥), and the turntable starts rotating.
3. The solenoid is actuated via route ④ and pushes out the drive-gear pawl. The drive gear rotates half a turn by the rotation of the turntable (for lead-in motion).
4. When the drive gear rotates and starts the lead-in motion, the timing switch (S1) changes to the N.C. position and the current flows via route ⑦ to keep Q13 conducting. The turntable continues to turn.
5. When the tonearm enters the out-of record groove, the clutch lever is pushed by the arm lever, pushing out the drive-gear pawl. (When the START/STOP button (S3) is pushed while playing, the solenoid is actuated via route ④ and the drive-gear pawl is pushed out.)
6. The drive gear rotates half a turn by the drive-gear pawl (for return motion) as the turntable rotates.
7. The timing switch (S1) changes the N.O. position by the mechanism when the tonearm completes the return motion. When the REPEAT switch (S5) is off, Q13 is turned off because no current flows via route ⑦. Provided with no bias, Q14 and Q15 do not conduct.
   Thus the power supply to IC2 is cut out and the turntable stops rotating.



Operation When the REPEAT Switch is ON

1–6. The same as when the START/STOP button is pushed.

7. C11 is charged via route ⑦ while the tonearm is on the arm rest (when S1 is in the N.C. position).
8. When the tonearm ends the return motion, the timing switch (S1) changes to N.O. position by the mechanism. Q13 keeps conducting at the same time by the discharge (route ⑧) of C11. The turntable continues to rotate. Q12 and Q10 turn on via route ⑧, thus actuating the solenoid. (route ⑨).
9. The drive gear rotates half a turn by the rotation of the turntable (for lead-in motion).

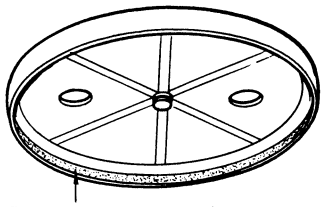


SECTION 2
DISASSEMBLY

REPAIR CAUTION

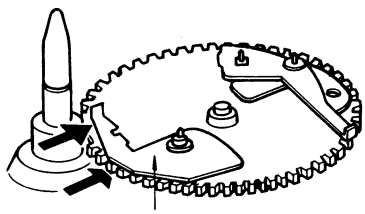
- Platter handling

backside of platter



Be sure not to spoil the magnetic coating. (dark brown color)

- Platter installation

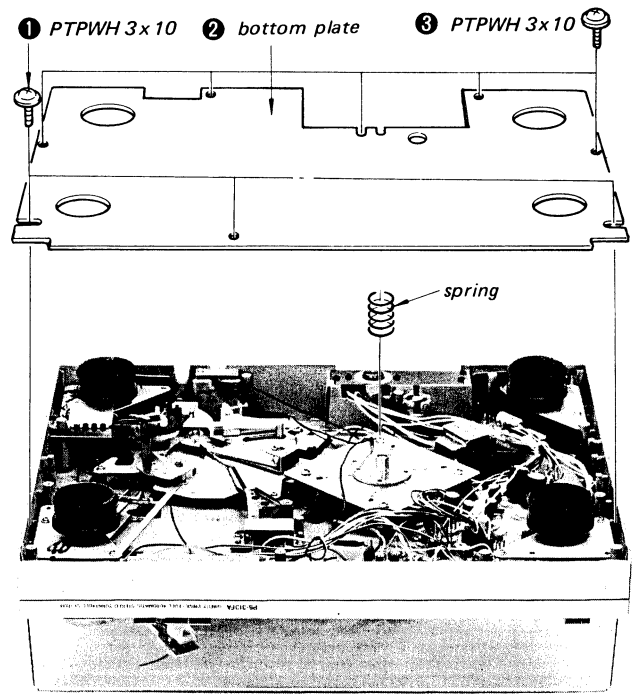


Be sure that the metal plate does not protrude outside the white gear.

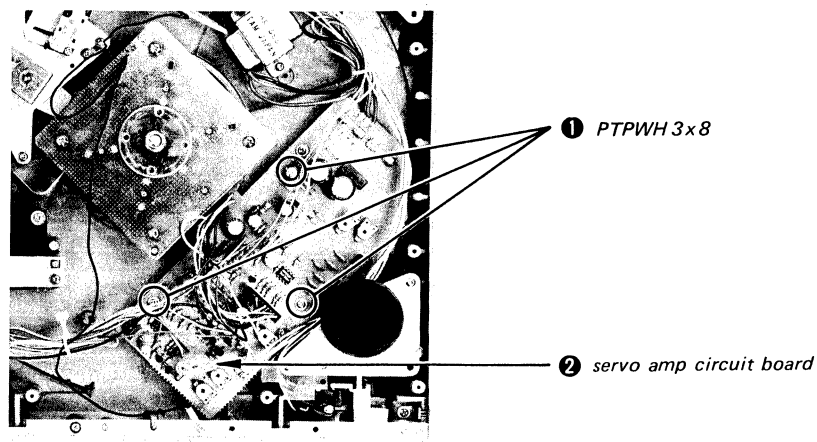
- Do not connect the power cord and remove the platter.

Note:
Follow the disassembly procedure in the numerical order given.

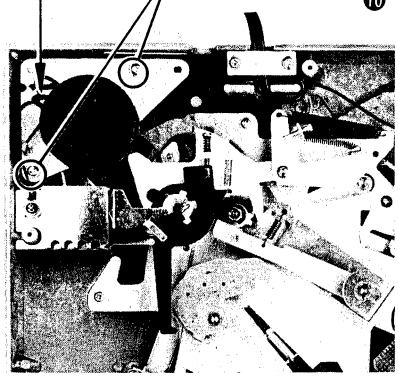
BOTTOM PLATE REMOVAL

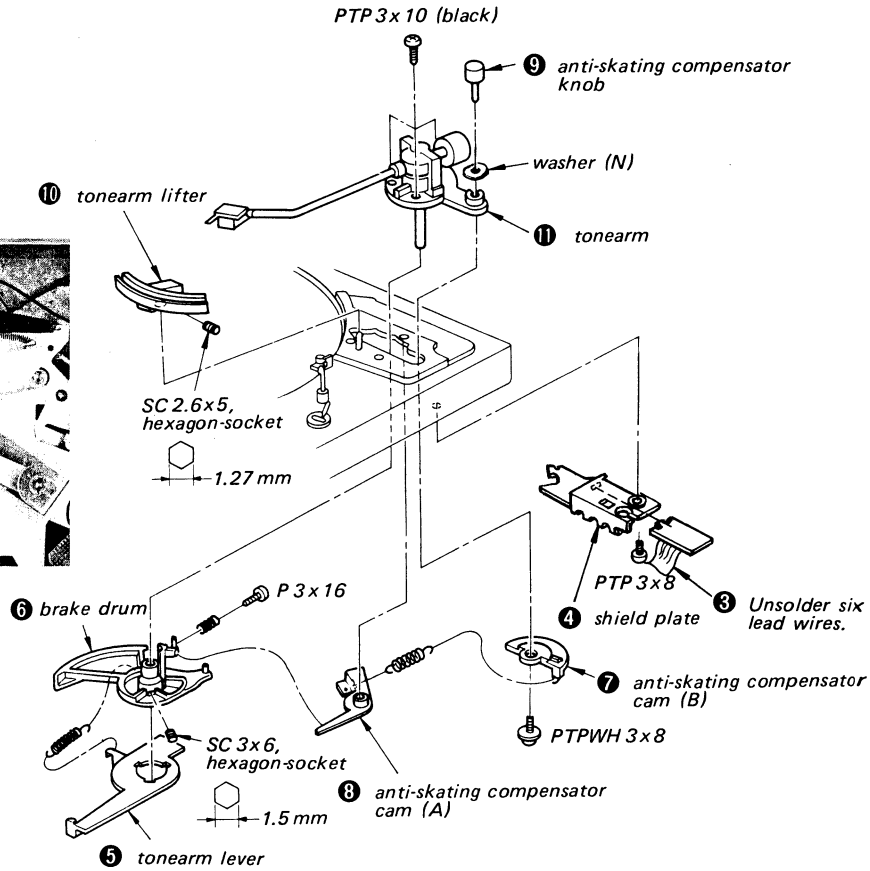


SERVO AMP CIRCUIT BOARD REMOVAL

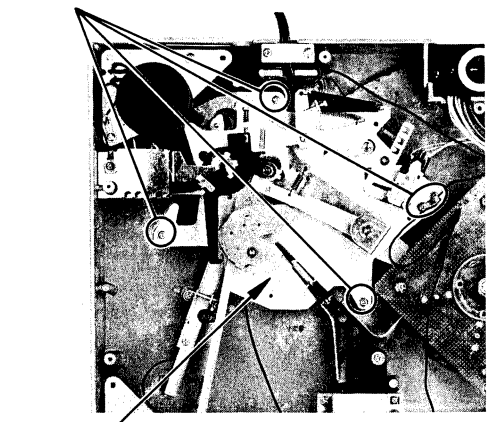


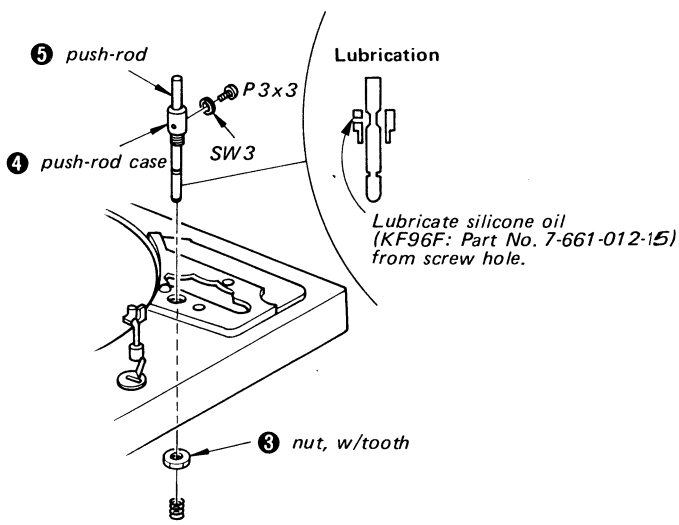
TONEARM REMOVAL



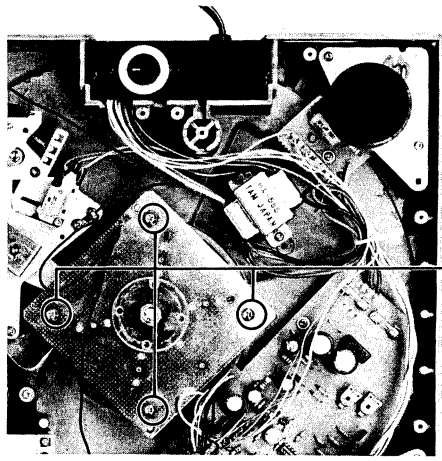


PUSH-ROD REMOVAL

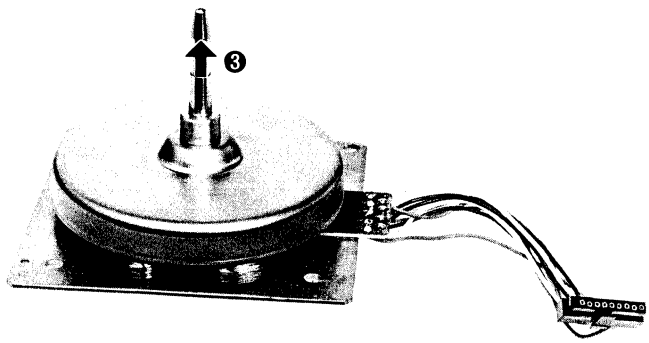


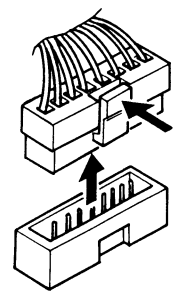


MOTOR REMOVAL

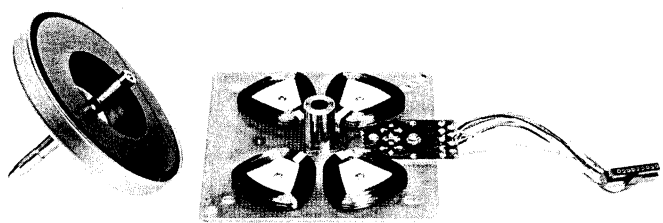


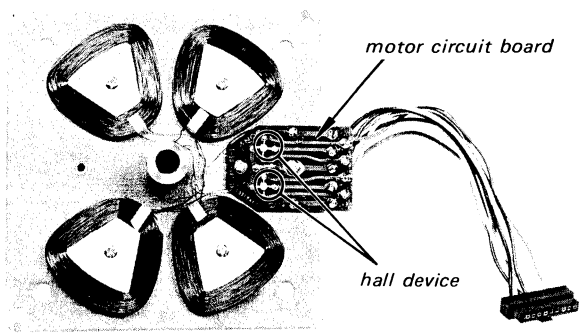
❶ *Remove four screws (BVTP4x12).*





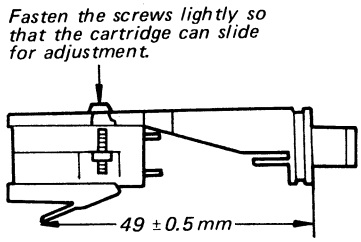
❷ *Pull out the connector by pushing in.*

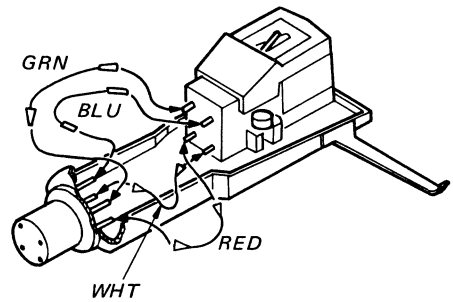




CARTRIDGE REPLACEMENT

Install the cartridge into the shell with the mounting screws so that the distance between the shell end and the stylus tip is 49 mm ($1\,^{15}/_{16}$ inches).





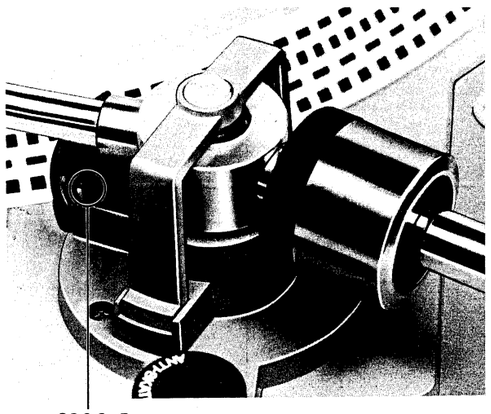
blue: left channel ground
white: left channel signal
green: right channel ground
red: right channel signal

SECTION 3
ADJUSTMENT

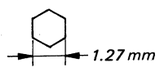
3-1. MECHANICAL ADJUSTMENTS

Stylus Height Adjustment
(POWER switch: OFF)

1. Set the record on the turntable.
2. Set the record size selector to MANUAL position.
3. Automatic Operation
   1) Bring the tonearm to last groove of the record.
   2) Rotate the turntable clockwise slowly by hand, and the tonearm is lifted up automatically.
   3) Make sure that the clearance between the stylus tip and the record is 4–12 mm ($^3/_{16}$–$^7/_{16}$ inches).
   4) If necessary, loosen the set screw and adjust the lifter height.



SC 2.6x5, hexagon-socket

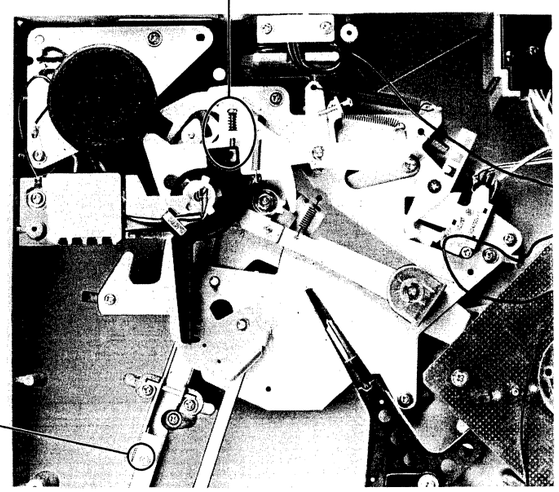


1.27 mm

4. Manual Operation
   1) Bring the tonearm to center groove of the record.
   2) Lift the cueing lever and make sure that the clearance between the stylus tip and the record is 4–12 mm ($^3/_{16}$–$^7/_{16}$ inches).
   3) If necessary, adjust the lifter height by turning the adjustment screw as shown below.

turning direction	lifter height
clockwise	up
counterclockwise	down

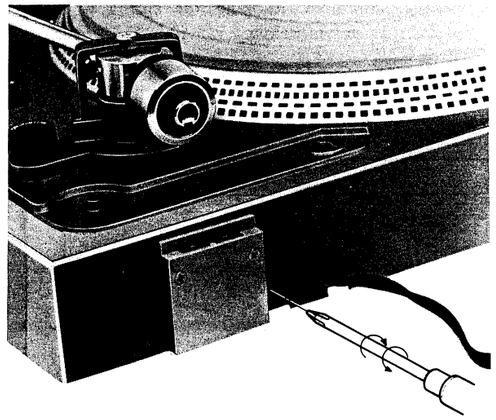
adjustment screw



Automatic Return Position Adjustment
(POWER switch: ON)

1. Set the test record (YFSB-6) on the turntable.
2. Before this adjustment, automatic return must be done.
3. Bring the tonearm to the return test groove of the record.
4. Make sure that the tonearm starts to return at count of 15–17.
5. If necessary, adjust the automatic return position by turning the adjustment screw as shown below.

turning direction	count of return position
clockwise	18 ↕ 1
counterclockwise	



Stylus Drop-point Adjustment
(POWER switch: ON)

1. Set the test record (YFSC-16) on the turntable.
2. Set the record size selector knob to the 30 (12″) position and make sure that the stylus gets down on the specified point of the test record.

   Specification:

Record size selector position	Count of drop-point
30 (12″)	6 to 10

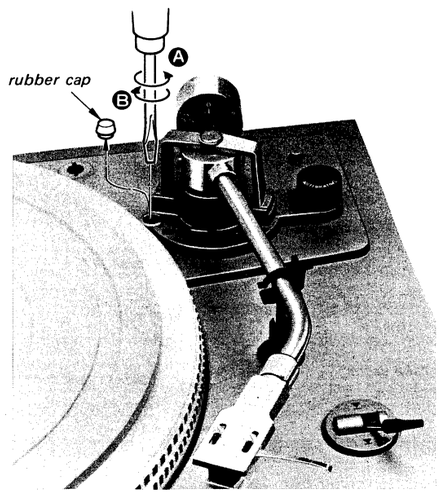
3. If necessary, insert the screwdriver into the hole and adjust the drop-point by turning the adjustment screw.

   To change the drop-point inward:
   Turn the adjustment screw slightly counterclockwise Ⓐ

   To change the drop-point outward:
   Turn the adjustment screw slightly clockwise Ⓑ

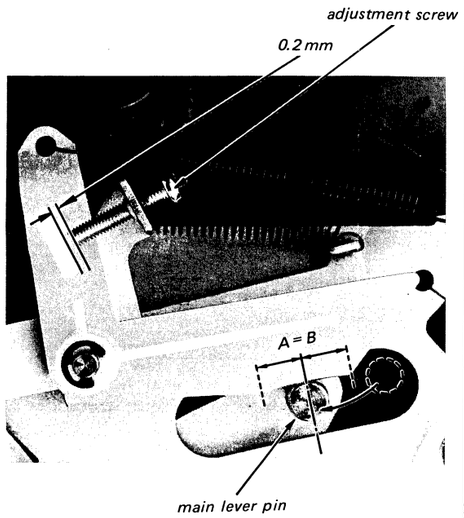
4. Once it is properly adjusted with a 30 cm (12″) record, the drop-point will be correct for 17 cm (7″) and 25 cm (10″) records as well.

   Note: The stylus drop-point is changed to about 12 mm (½″) by one turn of the adjustment screw.

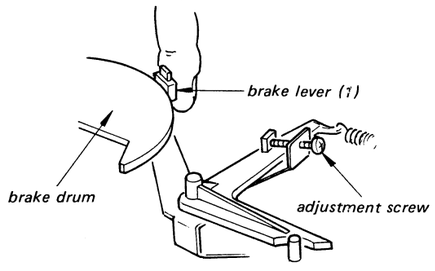


Brake Drum Position Adjustment
(POWER switch: OFF)

1. Rotate the drive gear counterclockwise by hand and set the main lever pin as shown below.



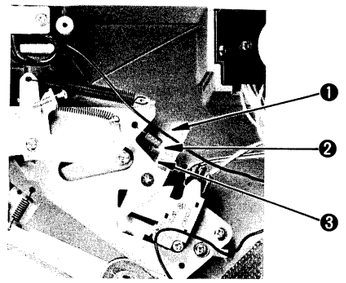
2. Contact the brake lever (1) to the brake drum by loosening the adjustment screw.
3. While pressing the brake lever (1) to the brake drum, tighten the adjustment screw fully clockwise.
4. Then, turn the adjustment screw counterclockwise about 1 turn.

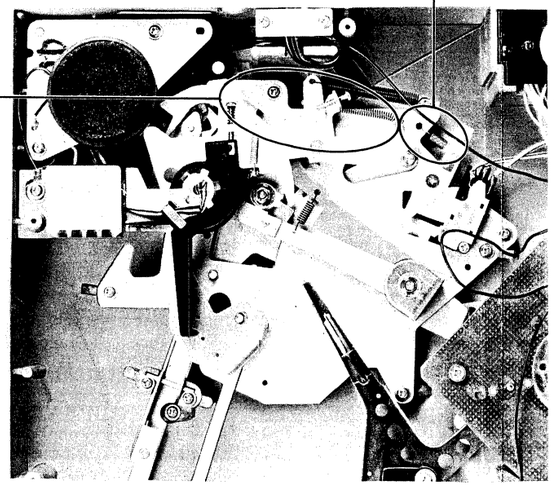


Reset Adjustment

If the tonearm returns during play without depressing the START/STOP button, adjust the tension of the spring by hooking the spring to stronger position as shown below.

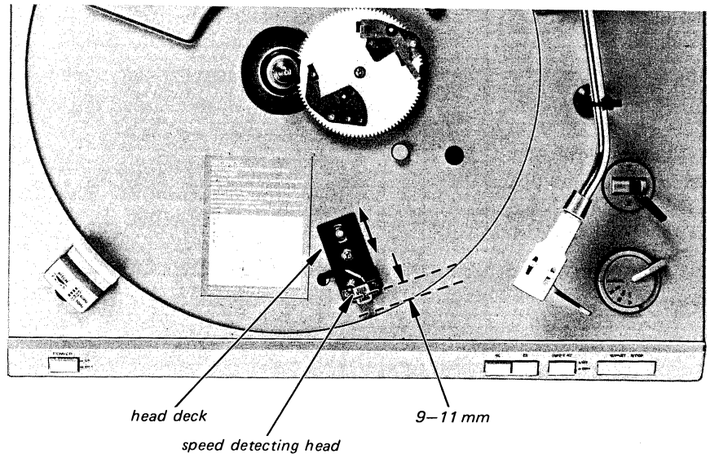
position	tension
❶	weak ↕ strong
❷	
❸	



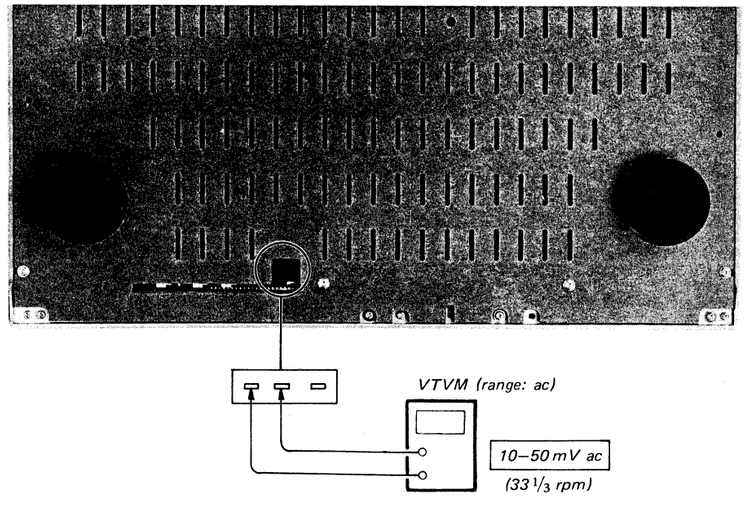


Speed Detecting Head Output Level Adjustment

Before this adjustment, set the speed detecting head on the head holder as shown below.



1. Adjust the position of the head holder so that the VTVM reading is 10–50 mV ac at 33 1/3 rpm.
2. Make sure that the head does not touch the turntable and tighten the screws securely.



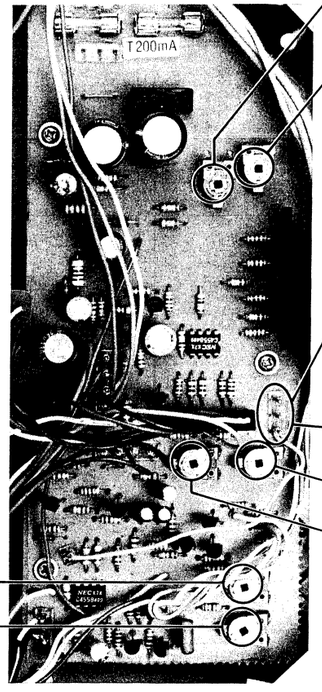
Note: The clearance between the magnet coated rim and the speed detecting head is more than 0.3 mm.

3-2. ELECTRICAL ADJUSTMENTS

Turntable Speed Adjustment

If correct speed cannot be obtained by adjusting the PITCH control, adjust RV1 (45) and RV2 (33).

1. Set the PITCH control knob to the mechanical-mid position.
2. Set the SPEED selector switch to "33" position and adjust RV2 so that the stroboscope pattern appears stationary.
3. Set the SPEED selector switch to "45" position and adjust RV1 so that the stroboscope pattern appears stationary.

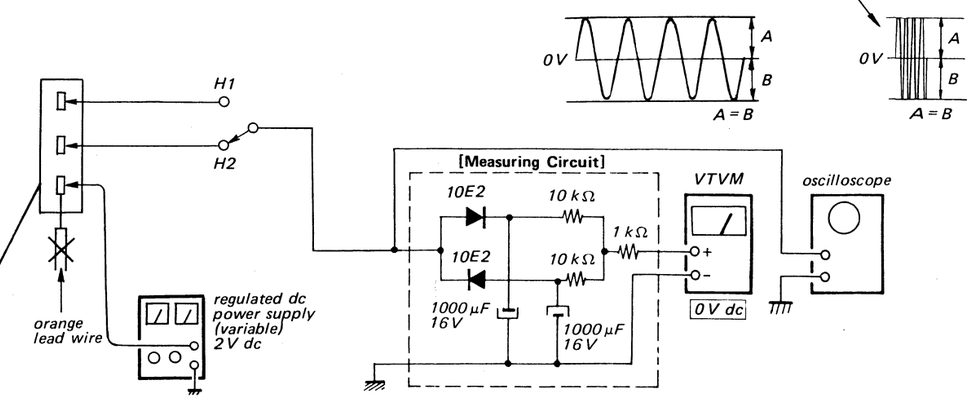


Motor Amp Offset Adjustment (33 1/3 rpm)

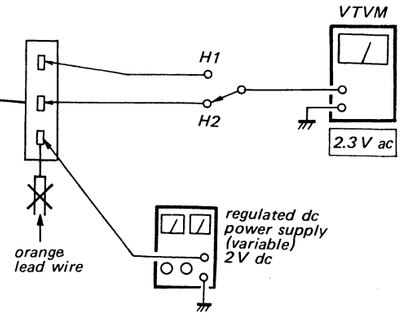
1. Disconnect the orange lead wire and connect the regulated power supply as shown below.
2. Connect VTVM or oscilloscope to H1 and adjust RV4 for 0V dc VTVM reading or the waveform on oscilloscope as shown below.
3. Connect VTVM or oscilloscope to H2 and adjust RV5 for 0V dc VTVM reading or the waveform on oscilloscope as shown below.

Waveform on Oscilloscope:

Note: Set the sweep time to longer for easy checking the waveform.



Hall Device Gain Adjustment (33 1/3 rpm)



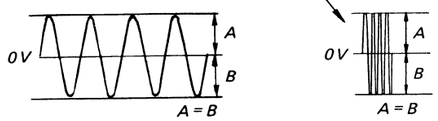
1. Disconnect the orange lead wire and connect the regulated power supply as shown.
2. Connect VTVM to H1 and adjust RV7 for 2.3V ac reading on VTVM.
3. Connect VTVM to H2 and adjust RV6 for 2.3V ac reading on VTVM.

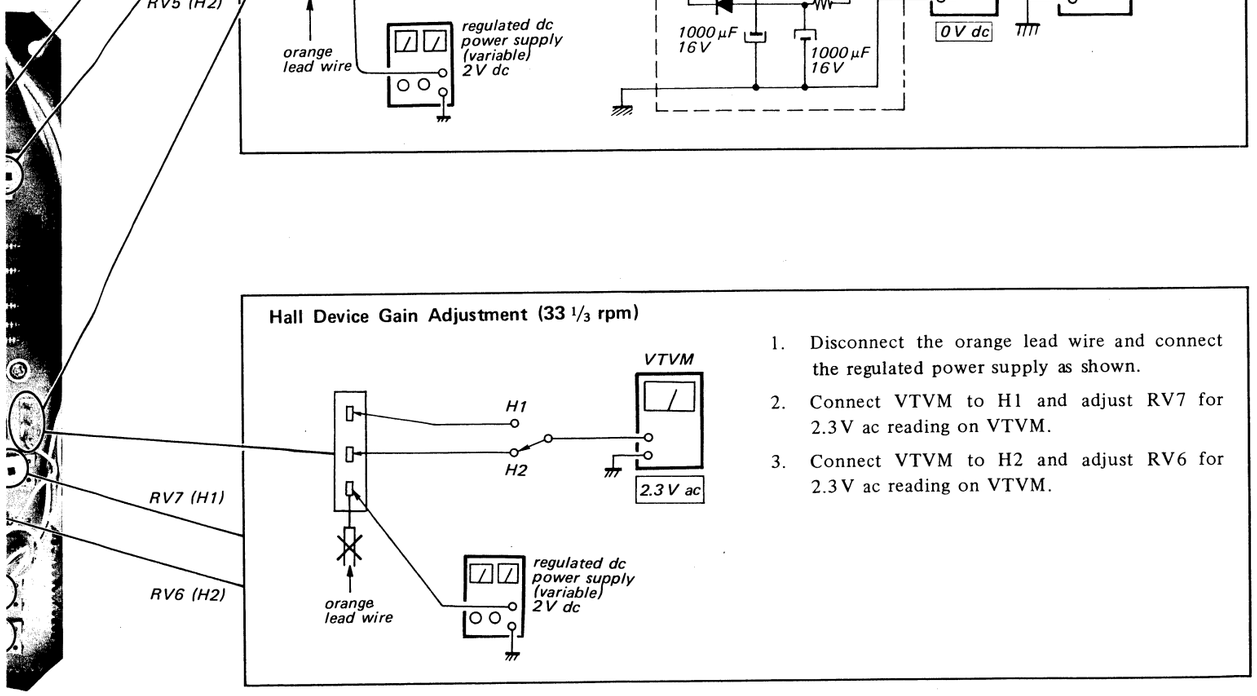
Motor Amp Offset Adjustment (33 1/3 rpm)

1. Disconnect the orange lead wire and connect the regulated power supply as shown below.
2. Connect VTVM or oscilloscope to H1 and adjust RV4 for 0V dc VTVM reading or the waveform on oscilloscope as shown below.
3. Connect VTVM or oscilloscope to H2 and adjust RV5 for 0V dc VTVM reading or the waveform on oscilloscope as shown below.

Waveform on Oscilloscope:

Note: Set the sweep time to longer for easy checking the waveform.





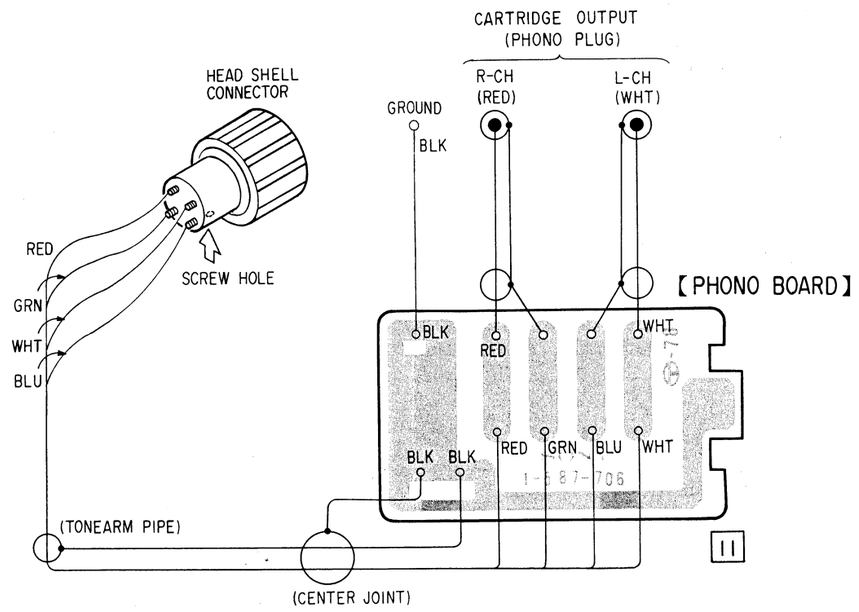
Hall Device Gain Adjustment (33 1/3 rpm)

1. Disconnect the orange lead wire and connect the regulated power supply as shown.
2. Connect VTVM to H1 and adjust RV7 for 2.3V ac reading on VTVM.
3. Connect VTVM to H2 and adjust RV6 for 2.3V ac reading on VTVM.

SECTION 4
DIAGRAMS

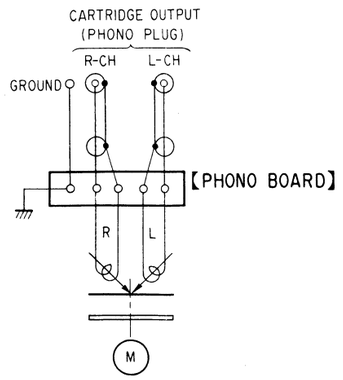
4-1. MOUNTING DIAGRAM

(Phono Board)



4-2. SCHEMATIC DIAGRAM

(Phono Board)



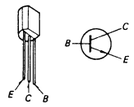
4-3. MOUNTING DIAGRAM

– Conductor Side –

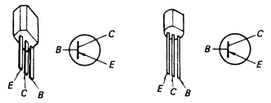
Replacement Semiconductors

For replacement, use semiconductors except in ( ).

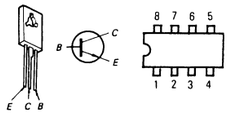
Q1–4
Q12, 13 }: **2SC1364 (2SC945)**
Q15



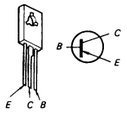
Q5, 11, 14: 2SA678 **(2SA733)**



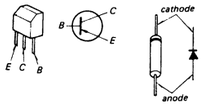
Q6, 8: 2SD414 **IC1, 2: μPC4558C**



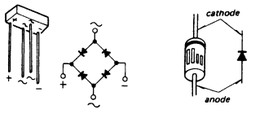
Q7, 9: 2SB548



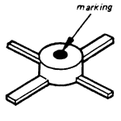
Q10: 2SB605 **D1–3: 1S1555**

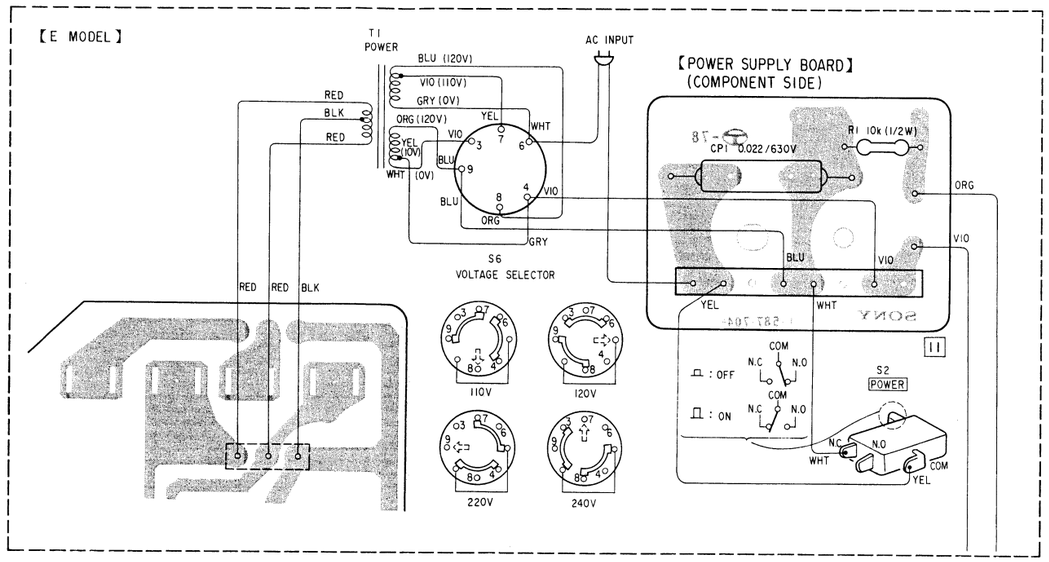


D4: S1RB10 **D5, 6: EQB01-11Z (EQA01-11S)**



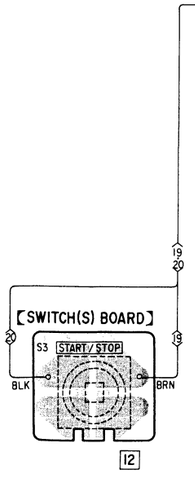
H1, 2: F1409 (HALL8)

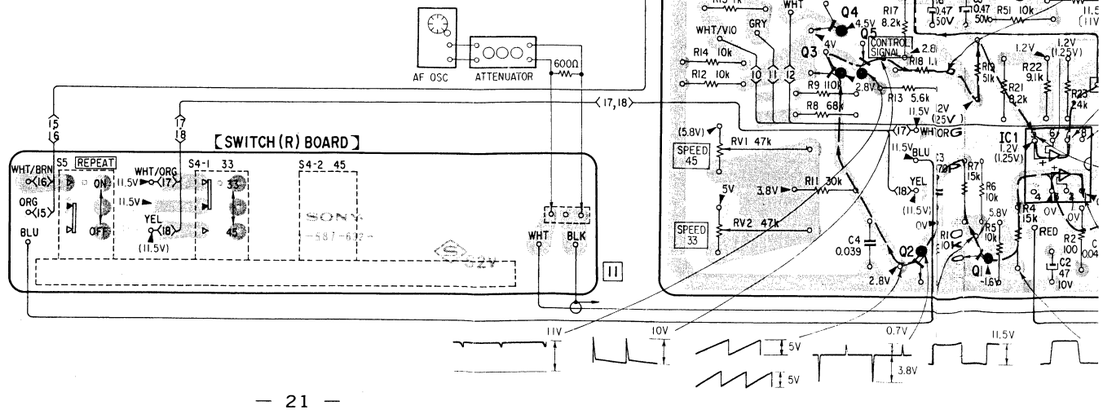


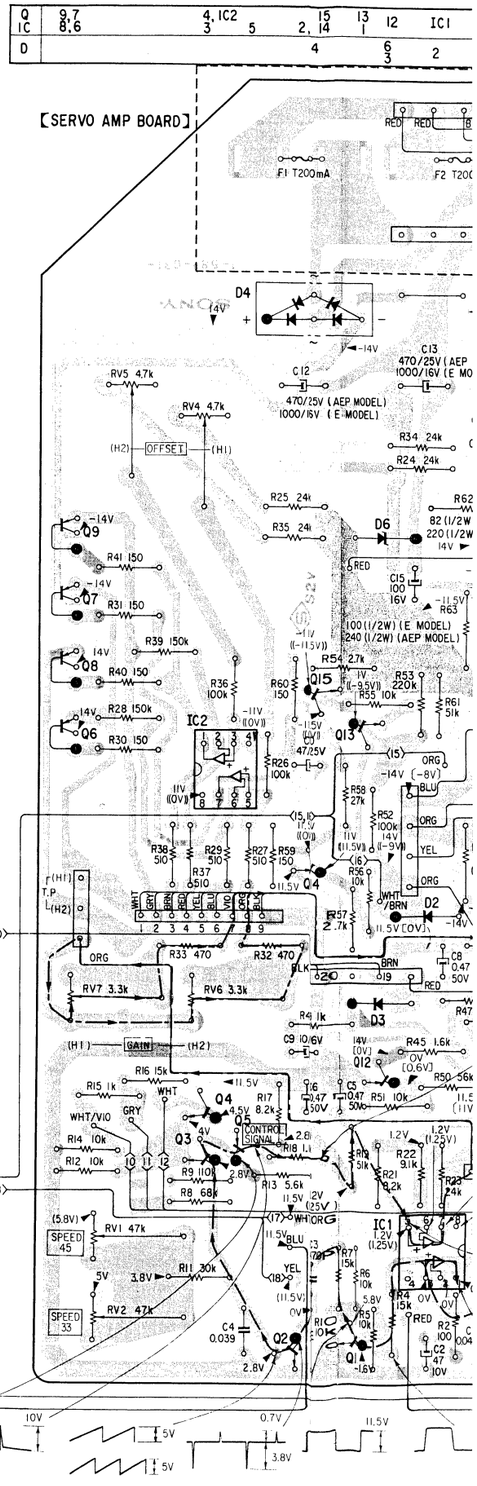


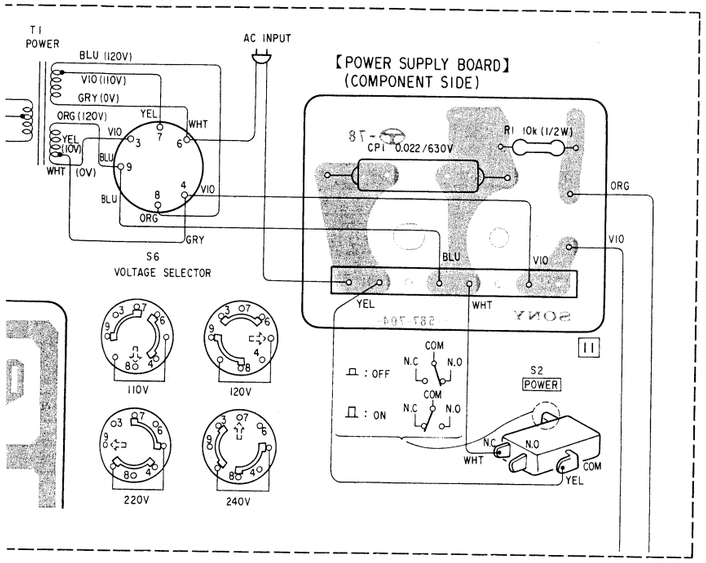
Note:

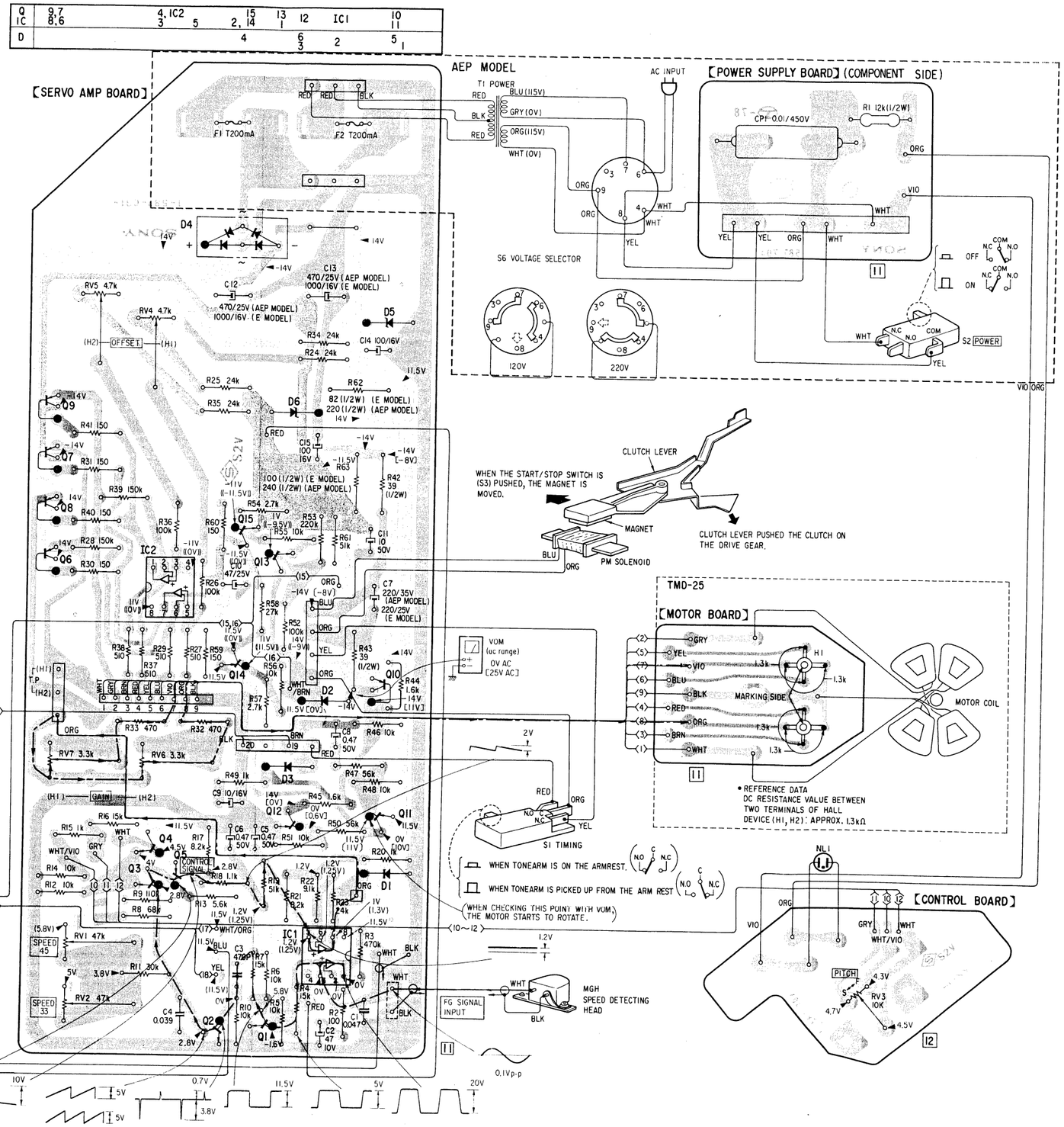
- ○—: parts extracted from the component side.
- : B+ pattern.
- : B– pattern.
- Signal Path
  ▬▬▶: FG signal
  ▬·▬▶: control signal
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no signal conditions with a VOM (20 kΩ/V).
  ( ): 45 rpm
  [ ]: At the moment when the START/STOP button is depressed
  (( )): STOP
  no mark: 33 rpm
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.



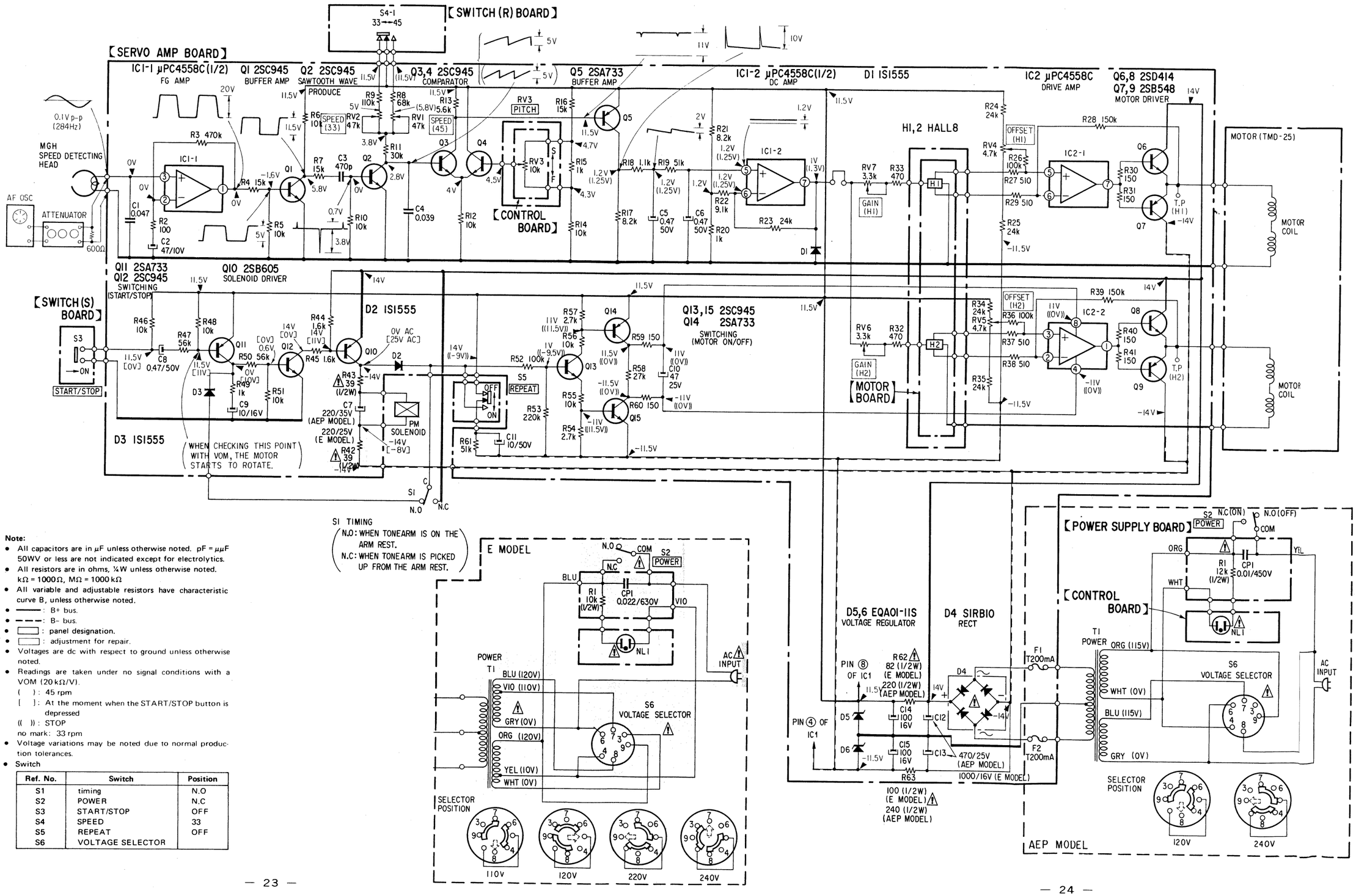





T1 POWER
AC INPUT
BLU (120V)
VIO (110V)
GRY (0V)
ORG (120V)
YEL (10V)
WHT (0V)
【POWER SUPPLY BOARD】 (COMPONENT SIDE)
C1 0.022/630V
R1 10k (1/2W)
S6 VOLTAGE SELECTOR
110V
120V
220V
240V
S2 POWER
OFF
ON
N.C
N.O
COM
WHT
YEL
ORG
VIO
BLU
GRY


【SERVO AMP BOARD】
AEP MODEL
T1 POWER
AC INPUT
【POWER SUPPLY BOARD】 (COMPONENT SIDE)
S6 VOLTAGE SELECTOR
120V
220V
S2 POWER
F1 T200mA
F2 T200mA
D4
C12 470/25V (AEP MODEL) 1000/16V (E MODEL)
C13 470/25V (AEP MODEL) 1000/16V (E MODEL)
RV5 4.7k
RV4 4.7k
OFFSET
D5
C14 100/16V
R34 24k
R24 24k
R25 24k
R35 24k
D6
R62 82 (1/2W) (E MODEL) 220 (1/2W) (AEP MODEL)
C15 100 16V
R63 100 (1/2W) (E MODEL) 240 (1/2W) (AEP MODEL)
R42 39 (1/2W)
R41 150
R31 150
R39 150k
R40 150
R28 150k
R30 150
R36 100k
R60 150
R54 2.7k
R55 10k
R53 220k
R61 51k
C11 10 50V
R26 100k
47/25V
R58 27k
R52 100k
C7 220/35V (AEP MODEL) 220/25V (E MODEL)
R38 510
R29 510
R27 510
R59 150
R37 510
R56 10k
R57 2.7k
D2
R43 39 (1/2W)
R44 1.6k
R33 470
R32 470
C8 0.47 50V
R46 10k
RV7 3.3k
RV6 3.3k
R49 1k
D3
R47 56k
R48 10k
C9 10/16V
R45 1.6k
R16 15k
R15 1k
R17 8.2k
C6 0.47 50V
C5 0.47 50V
R51 10k
R50 56k
R14 10k
R12 10k
R18 1.1k
R19 51k
R22 91k
R21 6.2k
R23 24k
D1
R9 110k
R13 5.6k
R8 68k
RV1 47k
RV2 47k
R11 30k
C3 47/25V
R6 15k
R10 10k
R5 10k
R4 15k
R2 100
C1 0.0047
C2 47 10V
R3 470k
C4 0.039
IC1
IC2
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
CONTROL SIGNAL
SPEED 45
SPEED 33
WHEN THE START/STOP SWITCH IS (S3) PUSHED, THE MAGNET IS MOVED.
CLUTCH LEVER
MAGNET
PM SOLENOID
CLUTCH LEVER PUSHED THE CLUTCH ON THE DRIVE GEAR.
TMD-25
【MOTOR BOARD】
MARKING SIDE
MOTOR COIL
HI
1.3k
• REFERENCE DATA
DC RESISTANCE VALUE BETWEEN TWO TERMINALS OF HALL DEVICE (HI, H2): APPROX. 1.3kΩ
VOM (ac range) 0V AC [25V AC]
S1 TIMING
WHEN TONEARM IS ON THE ARMREST.
WHEN TONEARM IS PICKED UP FROM THE ARM REST
(WHEN CHECKING THIS POINT WITH VOM) THE MOTOR STARTS TO ROTATE.
FG SIGNAL INPUT
MGH SPEED DETECTING HEAD
【CONTROL BOARD】
PITCH
RV3 10K
【SWITCH(S) BOARD】
S3 START/STOP
【SWITCH(R) BOARD】
S5 REPEAT
S4-1 33
S4-2 45
AF OSC
ATTENUATOR
600Ω
SONY

4-4. SCHEMATIC DIAGRAM



Note:

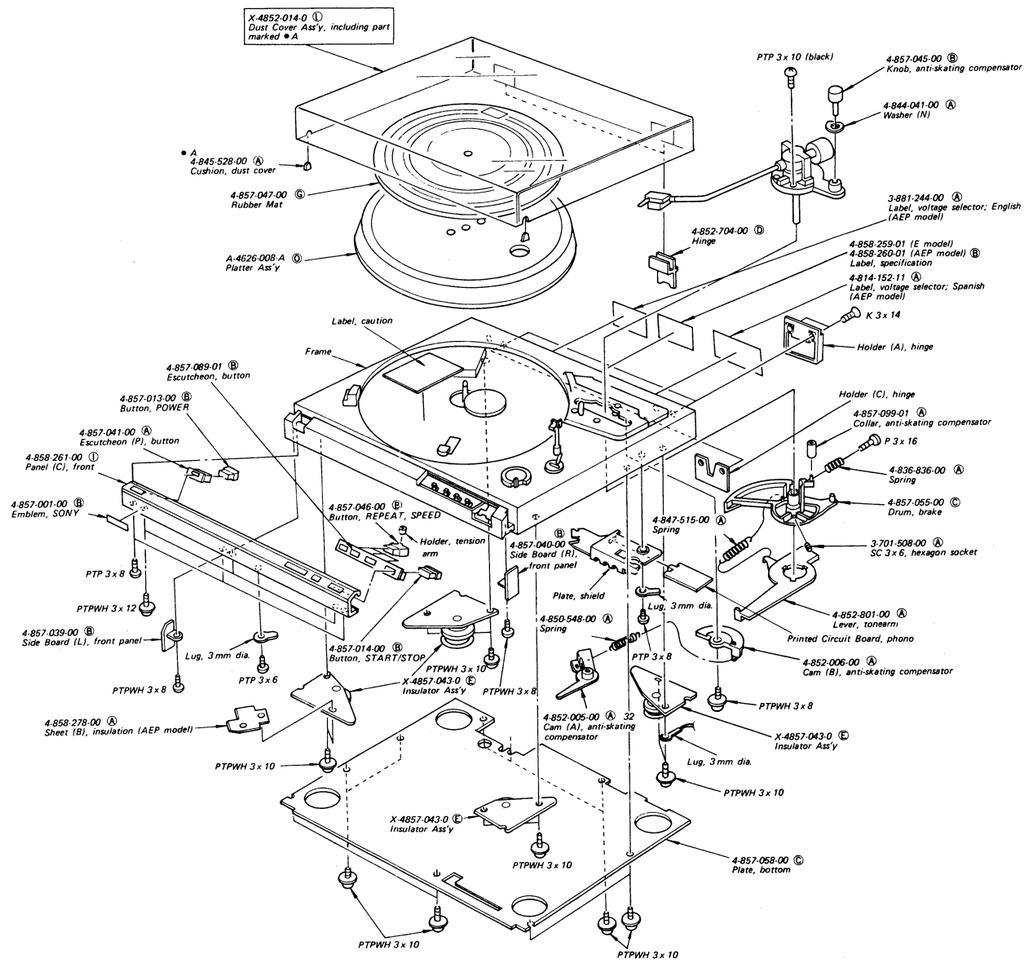
- All capacitors are in μF unless otherwise noted. pF = μμF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ = 1000Ω, MΩ = 1000 kΩ
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ——— : B+ bus.
- - - - : B- bus.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no signal conditions with a VOM (20 kΩ/V).
  ( ) : 45 rpm
  [ ] : At the moment when the START/STOP button is depressed
  (( )) : STOP
  no mark : 33 rpm
- Voltage variations may be noted due to normal production tolerances.
- Switch

Ref. No.	Switch	Position
S1	timing	N.O
S2	POWER	N.C
S3	START/STOP	OFF
S4	SPEED	33
S5	REPEAT	OFF
S6	VOLTAGE SELECTOR	

SECTION 5
EXPLODED VIEWS

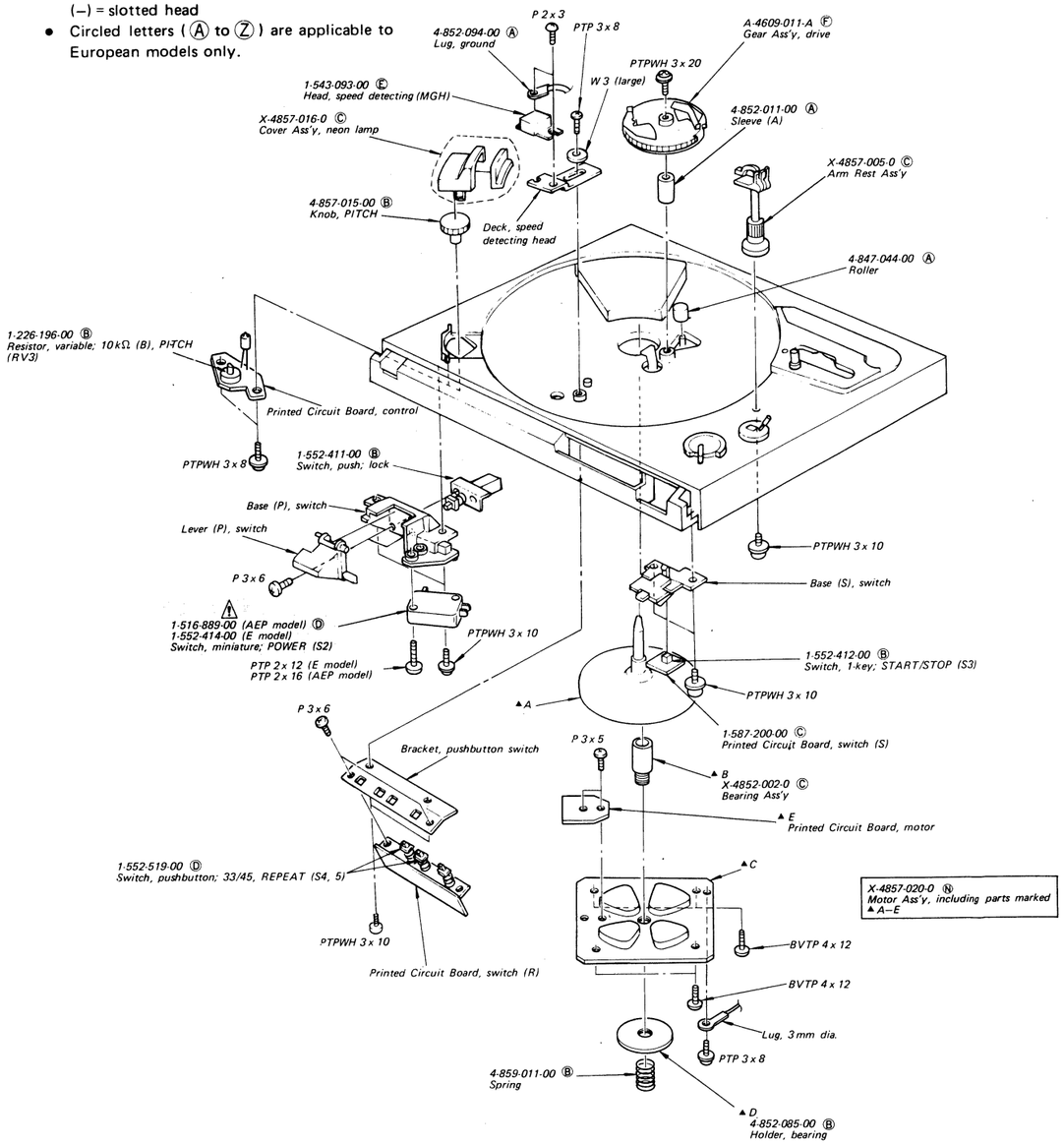
5-1. Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



5-2. Note:

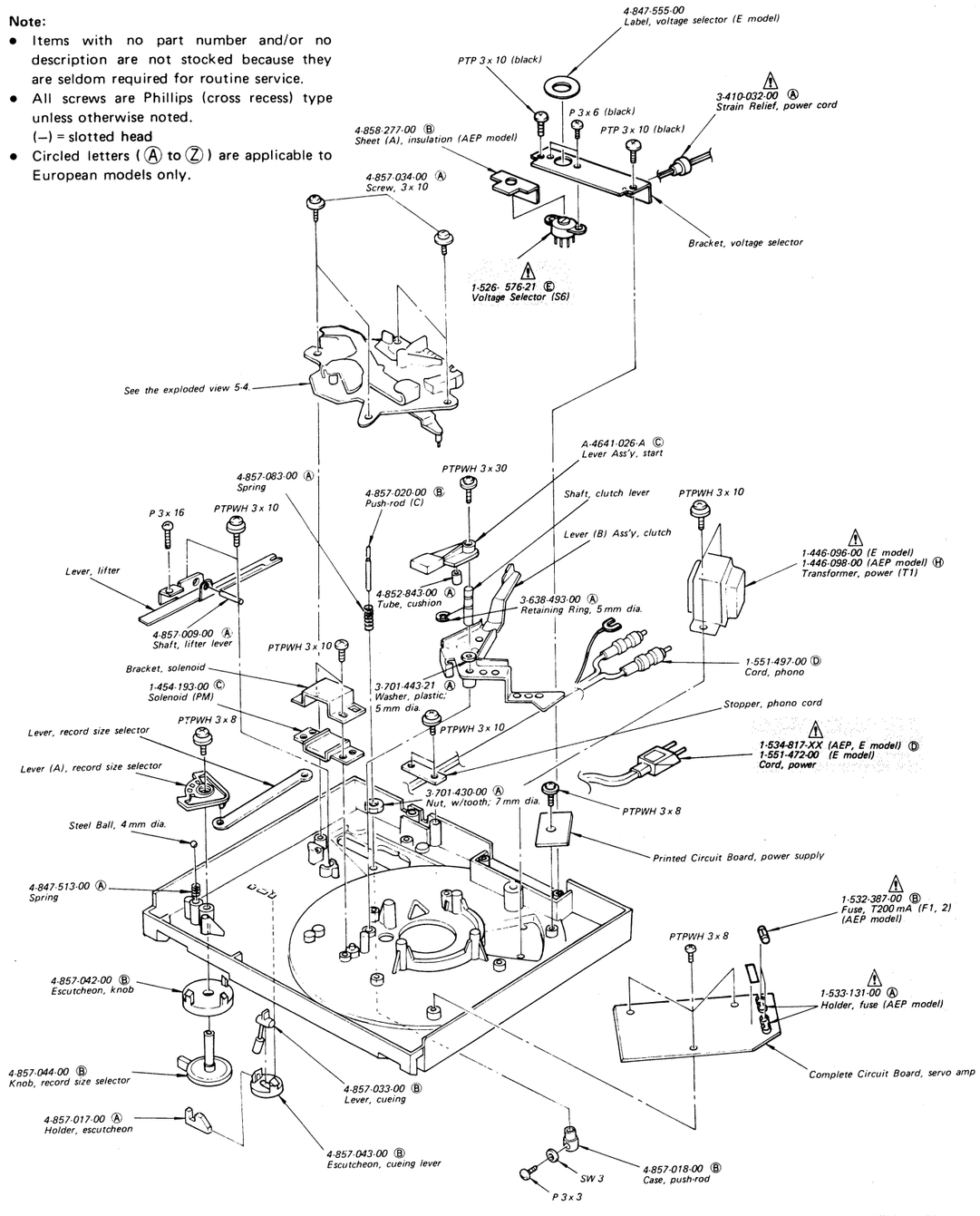
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-3. **Note:**

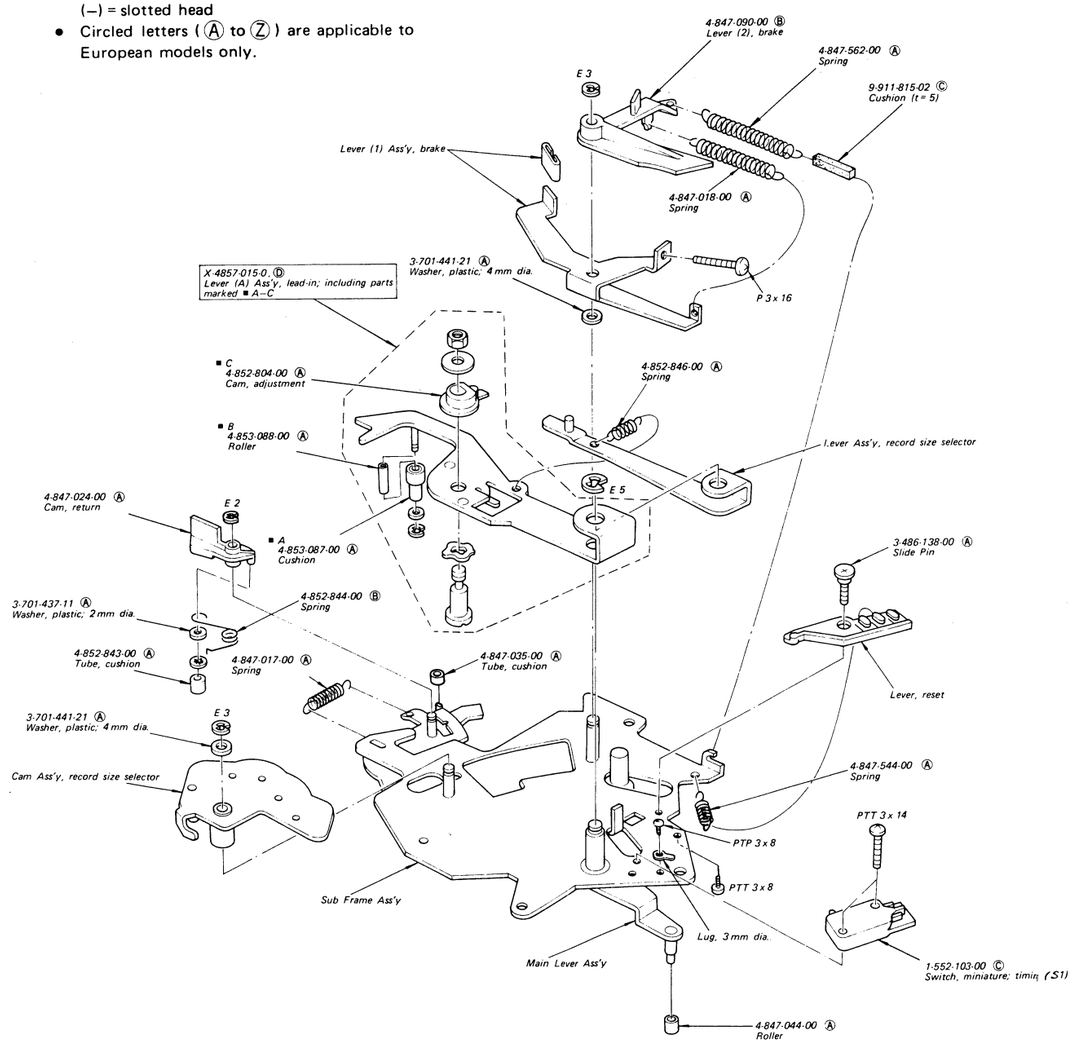
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-4. **Note:**

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

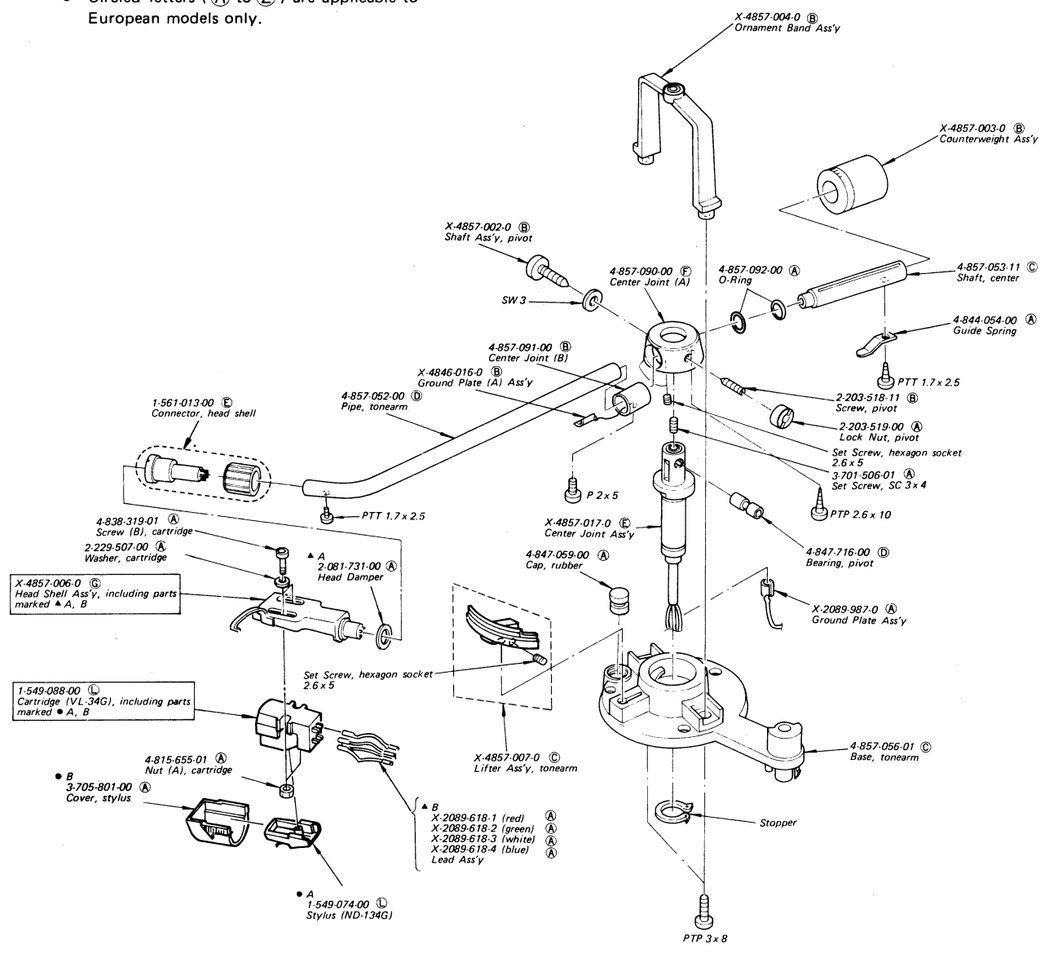


SECTION 6
ELECTRICAL PARTS LIST

- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

5-5. Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



Ref. No.	Part No.	Description
	PRINTED CIRCUIT BOARD	
	1-587-200-00 Ⓒ	Switch (S)
	SEMICONDUCTORS	
	Transistors	
⇒ Q1–4	8-729-663-47 Ⓑ	2SC1364
⇒ Q5	8-727-788-00 Ⓑ	2SA678
Q6	8-729-141-43 Ⓑ	2SD414
Q7	8-729-154-83 Ⓑ	2SB548
Q8	8-729-141-43 Ⓑ	2SD414
Q9	8-729-154-83 Ⓑ	2SB548
Q10	8-729-160-51 Ⓑ	2SB605
⇒ Q11	8-727-788-00 Ⓑ	2SA678
⇒ Q12,13	8-729-663-47 Ⓑ	2SC1364
⇒ Q14	8-727-788-00 Ⓑ	2SA678
⇒ Q15	8-729-663-47 Ⓑ	2SC1364
	ICs	
IC1,2	8-759-145-58 Ⓓ	μPC4558C
	Diodes	
D1–3	8-719-815-55 Ⓐ	1S1555
D4	⚠ 8-719-510-10 Ⓒ	S1RB10
⇒ D5,6	8-719-930-11 Ⓑ	EQB01-11Z
	Hall Device	
⇒ H1,2	8-719-814-09 Ⓓ	F1409
	TRANSFORMERS	
T1	⚠ 1-446-096-00	Power (E model)
	1-446-098-00 Ⓗ	Power (AEP model)

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.			
	CAPACITORS			
	All capacitors are in μF. 50WV or less are not indicated except for electrolytics. pF = μμF, elect = electrolytic			
C1	1-101-006-11 Ⓐ	0.047		ceramic
C2	1-121-409-11 Ⓐ	47	10V	elect
C3	1-102-114-11 Ⓐ	470p		ceramic
C4	1-108-360-12 Ⓐ	0.039		mylar
C5,6	1-121-951-11 Ⓐ	0.47	50V	elect
C7	1-121-063-11 Ⓑ	220	35V	elect (AEP model)
	1-121-936-11	220	25V	elect (E model)
C8	1-121-951-11 Ⓐ	0.47	50V	elect
C9	1-121-651-11 Ⓐ	10	16V	elect
C10	1-121-410-11 Ⓑ	47	25V	elect
C11	1-121-738-11 Ⓐ	10	50V	elect
C12,13	1-121-940-11 Ⓑ	470	25V	elect (AEP model)
	1-121-944-11	1000	16V	elect (E model)
C14,15	1-121-415-11 Ⓐ	100	16V	elect
	RESISTORS			
	All resistors are in ohms. Common ¼W carbon resistors are omitted. Refer to the list on the last page for their part numbers.			
R1	⚠ 1-244-897-11	10 k	½W	carbon (E model)
	1-244-899-11 Ⓐ	12 k	½W	carbon (AEP model)
R42,43	⚠ 1-244-839-11 Ⓐ	39	½W	carbon
R62	⚠ 1-244-847-11	82	½W	carbon (E model)
	1-244-857-11 Ⓐ	220	½W	carbon (AEP model)
R63	⚠ 1-244-849-11	100	½W	carbon (E model)
	1-244-858-11 Ⓐ	240	½W	carbon (AEP model)
RV1,2	1-224-647-XX Ⓑ	47 k-B, adjustable; speed		
RV3	1-226-196-00 Ⓑ	10 k-B, variable; PITCH		
RV4,5	1-224-644-XX Ⓑ	4.7 k-B, adjustable; offset		
⇒ RV6,7	1-224-644-XX Ⓑ	4.7 k-B, adjustable; gain		

- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

Ref. No.	*Part No.*	*Description*
		SWITCHES
S1	1-552-103-00	Ⓒ Miniature, timing
S2	⚠ 1-516-889-00	Ⓓ Miniature, POWER (AEP model)
	1-552-414-00	Miniature, POWER (E model)
S3	1-552-412-00	Ⓑ 1-key, START/STOP
S4,5	1-552-519-00	Ⓓ Pushbutton, 33/45, REPEAT
S6	⚠ 1-526-576-21	Ⓔ Voltage Selector
		MISCELLANEOUS
CP1	⚠ 1-115-148-11	Ⓒ 0.01 450V oil paper (AEP model)
	1-129-718-00	0.022 630V polyethylene (E model)
F1,2	⚠ 1-532-387-00	Ⓑ Fuse, T200 mA (AEP model)
MGH	1-543-093-00	Ⓔ Head, speed detecting
NL1	⚠ 1-519-135-00	Ⓒ Lamp, neon
PM	1-454-193-00	Ⓒ Solenoid
	X-4857-020-0	Ⓝ Motor Ass'y
	⚠ 1-533-131-00	Ⓐ Holder, fuse (AEP model)
	⚠ 1-534-817-XX	Ⓔ Cord, power; euro-plug
	1-549-088-00	Ⓛ Cartridge (VL-34G)
	including;	
	1-549-074-00	Ⓛ Stylus (ND-134G)
	3-705-801-00	Ⓐ Cover, stylus
	⚠ 1-551-472-00	Cord, power; parallel blade plug (E model)
	1-551-497-00	Ⓓ Cord, phono
	1-552-411-00	Ⓑ Switch, push; lock
	1-561-013-00	Ⓔ Connector, head shell

ACCESSORIES & PACKING MATERIALS

Part No.	*Description*
3-701-616-00	Ⓐ Bag, plastic
3-701-630-00	Ⓐ Bag, plastic
3-701-634-00	Ⓐ Bag, plastic
3-701-806-00	Ⓐ Adaptor (E), 45 rpm
3-770-583-11	Ⓓ Manual, instruction
3-793-395-11	Ⓑ Gauge, overhang adjustment
4-847-092-00	Ⓒ Screwdriver
4-847-314-00	Ⓒ Bag, plastic; set
4-852-078-00	Ⓑ Holder, platter
4-852-080-00	Ⓑ Cushion, upper
4-852-081-00	Ⓑ Cushion, lower
4-853-409-00	Ⓑ Cushion, tonearm
4-858-285-00	Ⓔ Carton

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

1/4 WATT CARBON RESISTORS Ⓐ

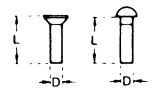
Note: Circled letter Ⓐ is applicable to European models only.

Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*
1.0	1-244-601-11	10	1-244-625-11	100	1-244-649-11	1.0k	1-244-673-11	10 k	1-244-697-11	100k	1-244-721-11	1.0M	1-244-745-11
1.1	1-244-602-11	11	1-244-626-11	110	1-244-650-11	1.1k	1-244-674-11	11 k	1-244-698-11	110k	1-244-722-11	1.1M	1-244-746-11
1.2	1-244-603-11	12	1-244-627-11	120	1-244-651-11	1.2k	1-244-675-11	12 k	1-244-699-11	120k	1-244-723-11	1.2M	1-244-747-11
1.3	1-244-604-11	13	1-244-628-11	130	1-244-652-11	1.3k	1-244-676-11	13 k	1-244-700-11	130k	1-244-724-11	1.3M	1-244-748-11
1.5	1-244-605-11	15	1-244-629-11	150	1-244-653-11	1.5k	1-244-677-11	15 k	1-244-701-11	150k	1-244-725-11	1.5M	1-244-749-11
1.6	1-244-606-11	16	1-244-630-11	160	1-244-654-11	1.6k	1-244-678-11	16 k	1-244-702-11	160k	1-244-726-11	1.6M	1-244-750-11
1.8	1-244-607-11	18	1-244-631-11	180	1-244-655-11	1.8k	1-244-679-11	18 k	1-244-703-11	180k	1-244-737-11	1.8M	1-244-751-11
2.0	1-244-608-11	20	1-244-632-11	200	1-244-656-11	2.0k	1-244-680-11	20 k	1-244-704-11	200k	1-244-728-11	2.0M	1-244-752-11
2.2	1-244-609-11	22	1-244-633-11	220	1-244-657-11	2.2k	1-244-681-11	22 k	1-244-705-11	220k	1-244-729-11	2.2M	1-244-753-11
2.4	1-244-610-11	24	1-244-634-11	240	1-244-658-11	2.4k	1-244-682-11	24 k	1-244-706-11	240k	1-244-730-11	2.4M	1-244-754-11
2.7	1-244-611-11	27	1-244-635-11	270	1-244-659-11	2.7k	1-244-683-11	27 k	1-244-707-11	270k	1-244-731-11	2.7M	1-244-755-11
3.0	1-244-612-11	30	1-244-636-11	300	1-244-660-11	3.0k	1-244-684-11	30 k	1-244-708-11	300k	1-244-732-11	3.0M	1-244-756-11
3.3	1-244-613-11	33	1-244-637-11	330	1-244-661-11	3.3k	1-244-685-11	33 k	1-244-709-11	330k	1-244-733-11	3.3M	1-244-757-11
3.6	1-244-614-11	36	1-244-638-11	360	1-244-662-11	3.6k	1-244-686-11	36 k	1-244-710-11	360k	1-244-734-11	3.6M	1-244-758-11
3.9	1-244-615-11	39	1-244-639-11	390	1-244-663-11	3.9k	1-244-687-11	39 k	1-244-711-11	390k	1-244-735-11	3.9M	1-244-759-11
4.3	1-244-616-11	43	1-244-640-11	430	1-244-664-11	4.3k	1-244-688-11	43 k	1-244-712-11	430k	1-244-736-11	4.3M	1-244-760-11
4.7	1-244-617-11	47	1-244-641-11	470	1-244-665-11	4.7k	1-244-689-11	47 k	1-244-713-11	470k	1-244-737-11	4.7M	1-244-761-11
5.1	1-244-618-11	51	1-244-642-11	510	1-244-666-11	5.1k	1-244-690-11	51 k	1-244-714-11	510k	1-244-738-11	5.1M	1-244-762-11
5.6	1-244-619-11	56	1-244-643-11	560	1-244-667-11	5.6k	1-244-691-11	56 k	1-244-715-11	560k	1-244-739-11		
6.2	1-244-620-11	62	1-244-644 11	620	1-244-668-11	6.2k	1-244-692-11	62 k	1-244-716-11	620k	1-244-740-11		
6.8	1-244-621-11	68	1-244-645-11	680	1-244-669-11	6.8k	1-244-693-11	68 k	1-244-717-11	680k	1-244-741-11		
7.5	1-244-622-11	75	1-244-646-11	750	1-244-670-11	7.5k	1-244-694-11	75 k	1-244-718-11	750k	1-244-742-11		
8.2	1-244-623-11	82	1-244-647-11	820	1-244-671-11	8.2k	1-244-695-11	82 k	1-244-719-11	820k	1-244-743-11		
9.1	1-244-624-11	91	1-244-648-11	910	1-244-672-11	9.1k	1-244-696-11	91 k	1-244-720-11	910k	1-244-744-11		

HARDWARE NOMENCLATURE

Screw: – P 3 x 10

- *L: Length in mm*
- *D: Diameter in mm*
- *Type of head*
- *Indicated slotted-head only. Unless otherwise indicated, it means cross-recessed head (Phillips type).*



Nut, Washer, Retaining ring: N 3

- *Diameter of usable screw or shaft*
- *Reference designation*

Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation

FULL AUTOMATIC STEREO TURNTABLE SYSTEM

PS-313FA

AEP Model
E Model

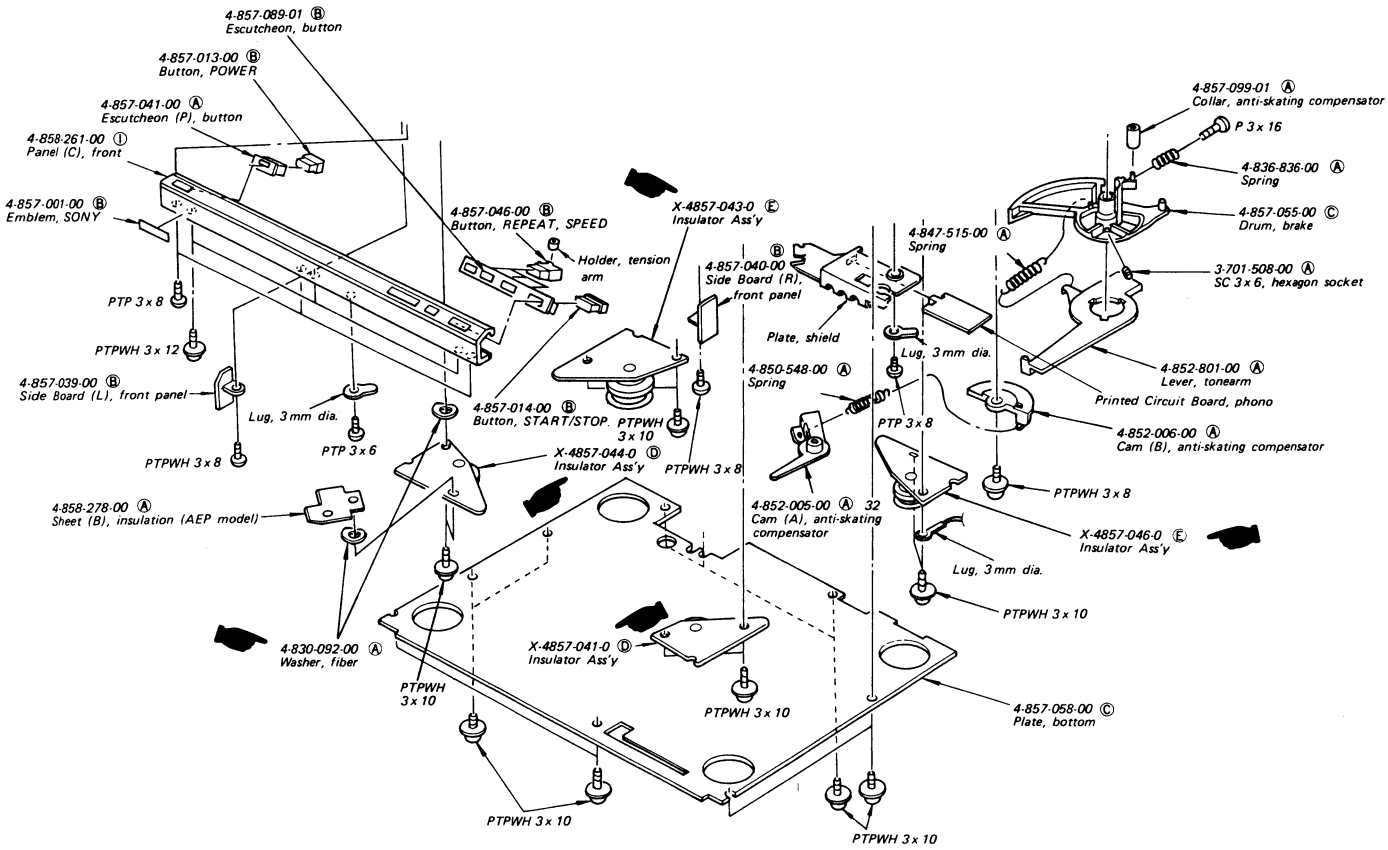
CORRECTION

File this Correction with the Service Manual.

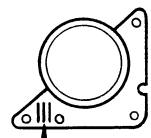
☛ : corrected portion

No. 1
March, 1979

Page 25. EXPLODED VIEW



Part No.	Mark	Installing Position
X-4857-041-0	1 black line	right-front
043-0	3 black lines	left-rear
044-0	1 red line	left-front
046-0	3 red lines	right-rear



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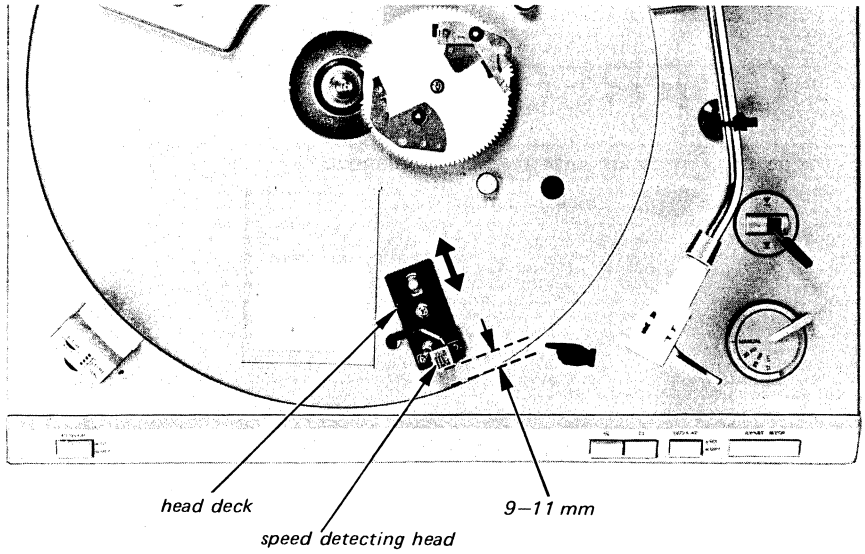
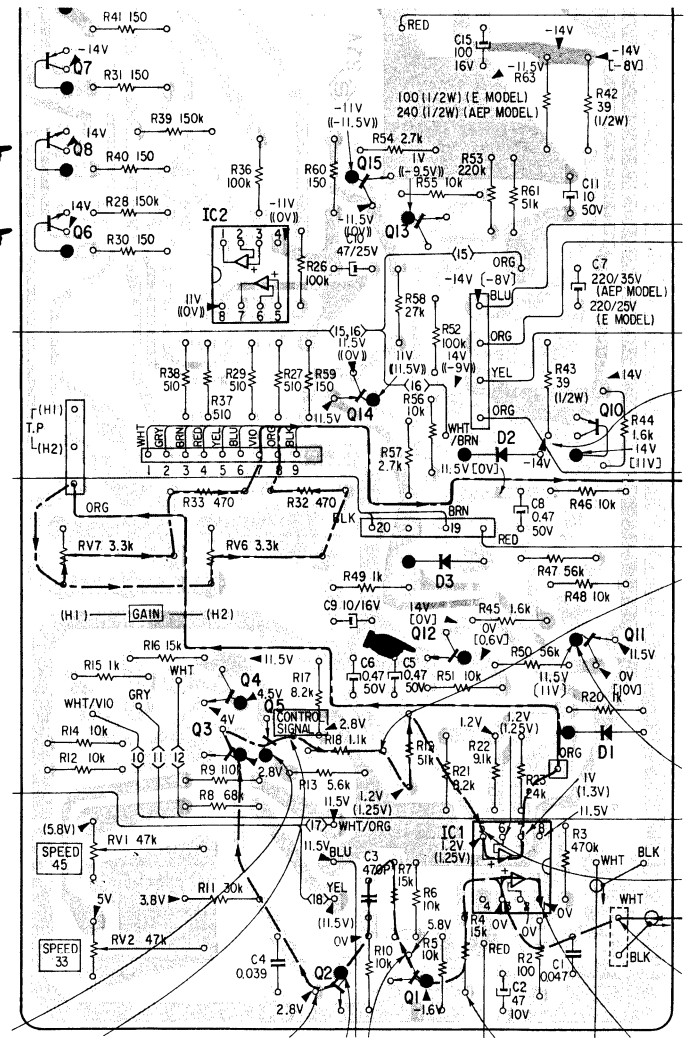
Page 16. SPEED DETECTION HEAD OUTPUT LEVEL ADJUSTMENT



Page 21, 22. MOUNTING DIAGRAM



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